To: Holland Shepherd
From: Neil Simmons

M/015/041

File Code 3809

RECORD OF DECISION AND
FINDING OF NO SIGNIFICANT IMPACT

EA Log No. UT-067-91-04

Lease or
Serial No. U67-P91-04

Project B & J Plan of Operations/Gypsum Mine

Applicant Lanny Jensen

Project Location T.22S.,R.9E.,Sec.29 SW4, Sec. 30 SE4, SLB&M

Address P.O. Box 416, Richfield, UT 84701

County Emery, Utah

BLM Office San Rafael Resource Area

Phone No. (801) 637-4584

RECORD OF DECISION

Decision: The following is the decision of the Bureau.

It is our decision to approve Lanny Jensen's Plan of Operation for a surface gypsum mine. Exhibit 1, (stipulations) will be made part of the plan of operations. A bond in the amount of $10,000 shall be required for reclamation. The bond amount shall be increased if and when surface disturbance exceeds the currently disturbed 5 acres.

Rationale:

Lanny Jensen requires a source of gypsum in order to supply various buyers. The surface protection measures included in the plan of operations and in BLM Exhibit 1 are expected to mitigate most of the impacts of the proposed operation. The proposed action is compatible with existing and proposed land use. Approval of the plan of operations is in conformance with federal, state, and local land use plans, including the San Rafael Resource Management Plan (pp. 19 and 81-82), which was approved May 24, 1991.

Vegetation on 63 acres would be destroyed over a 12-year period. There would be no residual impacts. The operation would exceed Class I VRM standards until reclamation is completed. Production of 600,000 tons of gypsum would be an irretrievable commitment of resources.

Authority for such action is granted to the Secretary of Interior under the provisions of Title III of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et. seq.).

Environmental Considerations: I have considered the environmental consequences of this decision as documented in the accompanying environmental assessment or categorical exclusion, referenced above. Except as noted in the Rationale, all environmental considerations have been adequately addressed in the accompanying document.

STIPULATIONS

This decision incorporates by reference the attached stipulations. The stipulations have been developed to mitigate adverse environmental impacts which may result from the action permitted by this decision.

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the accompanying environmental assessment, referenced above, I have determined that impacts are not expected to be significant. Therefore an environmental impact statement is not required.

Area Manager — Date: 8-28-91

I Concur:

District Manager — Date: 8/29/91

UT-060-1790-2
July 1986

File Code 3809

STIPULATIONS

EA Log No. UT-067-91-04

Lease or Serial No. U67-P91-04

Project B & J Plan of Operations/Gypsum Mine

Applicant Lanny Jensen

Project Location T.22S.,R.9E.,Sec.29 SW1/4, Sec. 30 SE1/4 SLB&M

Address P.O. Box 416, Richfield, UT 84701

County Emery, Utah

BLM Office San Rafael Resource Area

Phone No. (801) 637-4584

The following stipulations have been developed to mitigate adverse environmental impacts which may result from the action permitted by the accompanying decision. The action permitted and its anticipated impacts are fully described in the environmental assessment or categorical exclusion referenced above.

Exhibit 1

1. If subsurface cultural values are exposed during the course of operations, work shall cease at the site and the San Rafael Resource Area shall be notified. All employees working in the area shall be informed by the operator that they will be subject to prosecution for disturbing identified cultural sites or picking up artifacts.

2. Blasting shall be limited to the daylight hours Monday through Friday.

3. Disturbed areas shall be recontoured such that an undulating surface is left. The recontoured area shall be furrowed with the contour such that a roughened surface is left.

4. The following seed mixture shall be used during reclamation at a rate of 6 1/2 pounds per acre.

Grasses/Species		Pounds Per Acre
Indian ricegrass	Oryzopsis hymenoides	2
Needleandthread	Stipa comata	1
Galleta grass	Hilaria jamesii	1
Shrubs & Forbs/Species		
Shadscale	Atriplex confertifolia	1/2
Fourwing saltbush	Atriplex canescens	1/2
Winterfat	Eurotia lanata	1/2
Yellow sweet clover	Melilotus officinalis	1/2
Scarlet globemallow	Sphaeralcea coccinea	1/2
	Total	6 1/2

low

5. No oil, lubricants, or toxic substances shall be drained onto the ground surface.

6. The area shall be kept litter free. Trash shall be collected and contained and shall not be allowed to accumulate. All trash shall be removed and hauled to an authorized dump or landfill.

7. Reclaimed areas shall be fenced if deemed necessary by the authorized officer. Fences shall consist of three strands of barbed wire. Fences shall be removed by the operator when reclamation has been determined to be complete.

8. A cultural inventory shall be completed prior to any surface-disturbing activity occurring in mine area D. If cultural sites are found, mitigating measures will be required.

9. Stockpiles shall not be allowed outside the pit and the stockpile height shall not exceed in height the original elevation of the land surface.

10. The San Rafael Area Office shall be notified at least 10 days in advance of commencement of any new activity in mine areas B, C, and D.

11. Reclamation shall be considered to be complete when so determined by the authorized officer. Reseeding, mulching, and other methods will be required if revegetation is not successful within five years after reseeding. The revegetation shall be considered to be successful when vegetation density is at least 75 percent of the vegetation density of the surrounding area.

Wang 2141D

UT-060-1790-3
July 1986

File Code 3809

ENVIRONMENTAL ASSESSMENT COVER SHEET

EA Log No. UT-067-91-04

Lease or Serial No. U67-P91-04

Project B & J Plan of Operations/Gypsum Mine

Applicant Lanny Jensen

Project Location T.22S.,R.9E.,Sec.29 SW1/4 Sec. 30 SE1/4, SLB&M

Address P.O. Box 416, Richfield, UT 84701

County Emery, Utah

BLM Office San Rafael Resource Area

Phone No. (801)637-4584

LIST OF PREPARERS

Name	Title	Resources Assigned
Tom Gnojek	Range Conservationist	Grazing, Vegetation
Jim Harte	Hydrologist	Air Qual.,Soils,Water
Laurelle Hughes	Realty Specialist	Lands
Mike Kaminski	Natural Resource Protection Specialist	Reclamation
Paul Kelley	Range Con.,	Hazardous Materials
Trish Lindaman	Outdoor Rec. Planner	Recreation, Visual Wilderness
Wayne Ludington	Wildlife Biologist	T & E, Wildlife
Blaine Miller	Archaeologist	Cultural
Neil A. Simmons	Geologist, Team Leader	Geology, Paleontology, Topography

Neil A. Simmons
Team Leader Signature

Geologist
Title

8-27-91
Date

Wang 2141D

UT-060-1790-1
July 1986

Need for Proposed Action

Lanny Jensen has submitted a plan of operations for a surface gypsum mine. The plan was submitted pursuant to 43 Code of Federal Regulations (CFR) 3809.1-4(a) & (b)(3) (1990 edition) for operations which exceed 5 acres of disturbance and occur within an area of critical environmental concern (ACEC).

The San Rafael Resource Management Plan was approved May 24, 1991. The Final RMP allows the development of locatable minerals (p. 19), but requires a plan of operations and conditions to protect resource values in the ACEC (pp. 81-82).

Emery County has the area zoned as open to mining. Regulations governing plans of operation are included in 43 CFR 3809. This action is authorized under the General Mining Law of 1872, as amended, (30 U.S.C. 22 et seq.), Sections 2319 (30 U.S.C. 22) and 2478 (43 U.S.C. 1201) of the revised statutes and the Federal Land Policy Management Act of 1976 (FLPMA) (43 U.S.C. 1701 et seq.).

Proposed Action and Alternatives

The proposed action would be to approve a plan of operations submitted by Lanny Jensen pursuant to 43 CFR 3809.1-4 (October 1990). The plan includes a surface mine, access roads, and a blasting agent storage area.

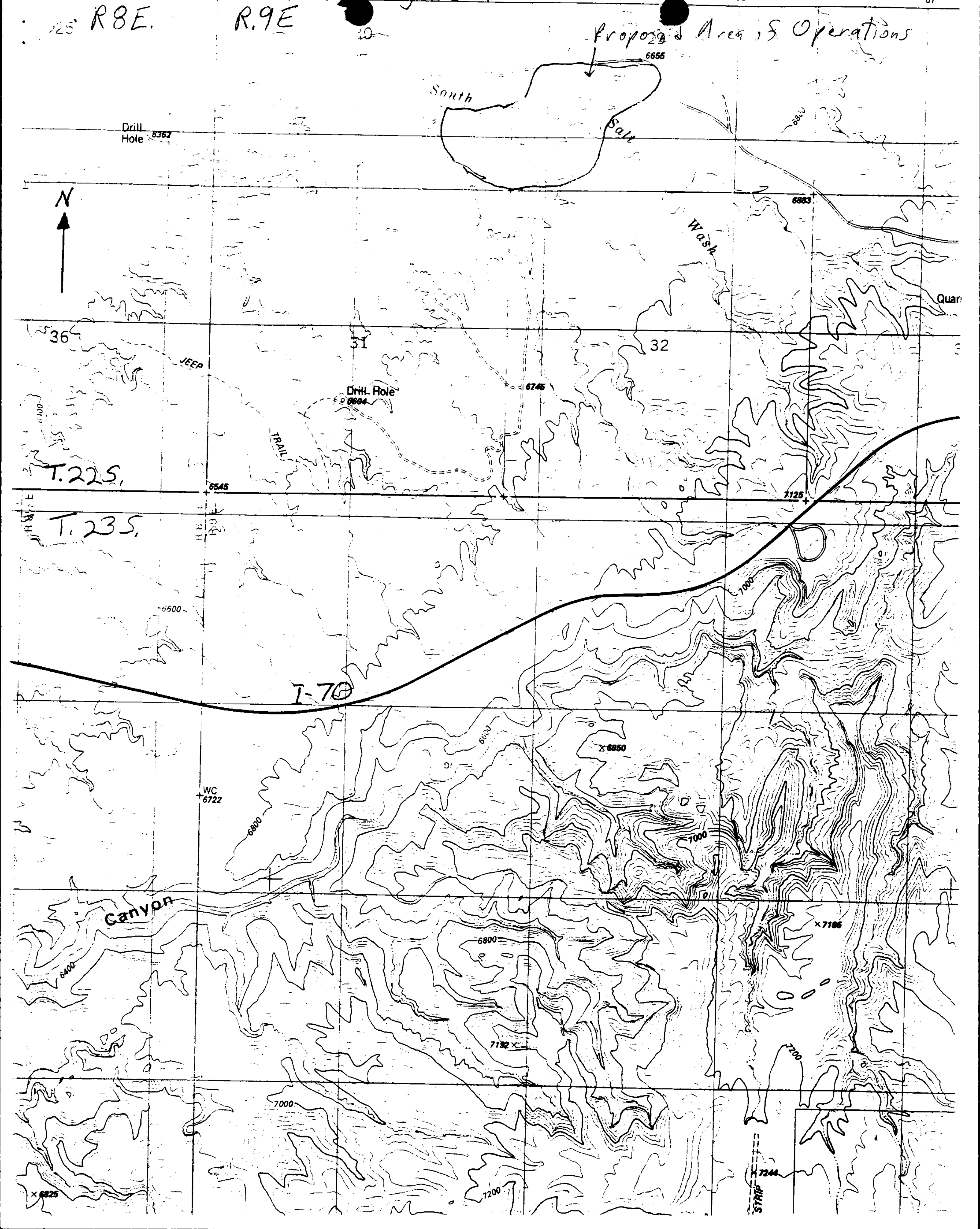
The operation is located on the B&J Mining claim group, Nos. 2, 5, 6, and 10 (UMC 212727, 212729, 226190, and 226191), which were located by William Wray, Jr. and John Welsh on December 16, 1979 and September 10, 1980. The remaining interest in these claims was quitclaimed to John Welsh. Standard stipulations would be applied to the operation. A reclamation plan was submitted, as were measures to save topsoil, control erosion and salinity loss, reduce visual impairment and promote safety.

Crushing and stockpiling of gypsum was submitted initially, but the plan was amended to delete this part of the operation (see Plan of Operations, Appendix A). The proposed operation is located in T. 22 S., R. 9 E., Sections 29 and 30, SLM, in Emery County, Utah.

Lanny Jensen is currently operating a surface gypsum mine under a notice, SR-84-4, which is about 5 acres in extent. Other notices for exploration and/or proposed mining include SR-86-7, SR-88-2, and SR-89-7. Activities under these notices have been reclaimed or have been incorporated into this plan of operations. These notices will be superseded and incorporated into this plan of operations.

Lanny Jensen proposed to mine a total of 60 acres for gypsum over a twelve-year period. The mine is divided into four areas--A, B, C, and D--with Area A being mined first and Area D last. Area A would have 10 acres of disturbance: Area B, 5 acres; Area C, 28 acres; and Area D, 17 acres. The gypsum would be mined at a rate of 50,000 tons per year and the disturbance would be a maximum of 5 acres per year.

Figure 1


(SID AND CHARLEY)
R8E.
R.9E
Proposed Area of Operations
6655
South
Salt
Wash
Drill Hole 6362
6883
N
Quar
36
31
32
JEEP
TRAIL
Drill Hole 6604
6745
T.22S.
T.23S.
6545
7125
7000
6600
I-70
6850
WC 6722
6800
7000
Canyon
7186
6400
6800
7132
7200
7000
7244
STRIP
6825
7200

The cryptogamic soil (top one or two inches) of an area would be removed and stockpiled separately from the remaining topsoil, which would also be stockpiled. The gypsum is drilled to a depth of not more than 15 feet and then blasted. Blasting would be done once every six weeks with approximately 120 holes in the shot. Blasting agents would be stored off the mine site in an approved container. Traffic on the county road would be halted while blasting is in progress. All state and federal blasting regulations would be adhered to.

The broken gypsum would be loaded into trailer trucks by a front-end loader. About six trips would be made daily, five days per week. The gypsum would be hauled to the buyer, or if crushing is required it would be contracted out in the Richfield area. Only broken gypsum would be stockpiled at the quarry. The quarry would have a bench height of 15 feet. The quarry would maintain a 100-foot distance from the county road and a 30-foot barrier between the quarry and the main tributary of South Salt Wash. Low water crossings with concrete aprons would be installed to access Areas C and D.

Two men would mine gypsum one day a week, while two truckers would load and haul gypsum five days a week.

Area D will be inventoried for cultural sites prior to any surface-disturbing activities occurring in those areas. Mitigating measures will be required if sites are found.

Mined-out areas would be recontoured on an annual basis. The subsoil would be spread, then the lower portion of the subsoil, and finally the cryptogamic soil. The highwall would be reduced to no more than a 3 (horizontal) to 1 (vertical) slope and the area reseeded with native plants every fall until all disturbed areas are reclaimed and satisfactorily revegetated.

Check dams and sedimentation basins would be constructed to retain sediment and salt within the project area. Small drainage systems would be diverted and re-established as needed.

Signs would be posted warning of any potential hazards.

Magnesium chloride would be applied to the county road in order to control dust.

About 6 acres are expected to be disturbed at any given time due to mining, access roads, etc.

For analysis purposes, it is assumed that successful reclamation will take no more than five years after recontouring and reseeding. The areas undergoing reclamation (after reseeding) should not exceed 25 acres until the end of the project when the access road and storage area are reclaimed, at which time there would be a total of 28 acres under reclamation. Total disturbance over the twelve-year period would be approximately 63 acres, including 60 acres of disturbance due to mining and an additional 3 acres of disturbance due to reducing the highwall, and access roads and storage area.

All federal, state, and local air quality, water quality, and solid waste laws and regulations would be complied with during the course of operation of the mine.

No Action

The result of this action would be disapproval of the plan of operations. Since Lanny Jensen is operating under a notice, SR-84-4, he would not be allowed to disturb more than 5 acres. Disturbance beyond 5 acres would not occur under this alternative.

Affected Environment

The subject land is located on the western flank of the San Rafael Swell, a breached, doubly-plunging anticline. The Wasatch Plateau is located to the west, while to the east is Sinbad Country, the center of the San Rafael Swell. The operation is located between the Moore Road to the north and a tributary of South Salt Wash to the south.

The subject land is public land and is open to location. Master Title Plats disclose that both the surface and mineral estates are owned by the Federal Government and managed by the Bureau of Land Management.

The subject land is managed by and contained within the San Rafael Resource Area.

Affected Resources

The subject area is sparsely vegetated with Indian ricegrass, shadscale, galleta grass and Mormon tea. There are also a few scattered trees, pinyon pine, and Utah juniper. Animals inhabiting the area include ground squirrels, coyotes, and various snakes. No game animals or species of high federal interest are known to frequent the area. Vegetation productivity is approximately 15 acres per AUM.

The proposed operation is located in an area designated as critical soils (see GIS Map 2, Appendix D). These shallow gypsiferous soils are highly erosive when disturbed. Current erosion rates for the area are estimated to be between 1.4 and 15 tons per acre per year for sediment and from .0041 to .26 tons per acre per year for salt. The subject land includes South Salt Wash, an ephemeral stream, and contains two tributaries to South Salt Wash. The nearest perennial stream is Muddy Creek, 13 miles to the southwest.

The surface of the subject land is covered by a cryptogamic crust, which is an association of mosses, bacteria, and fungi, and other plants which reproduce by spores. The cryptogams form an irregular crust on the surface. The operation is in a Class I Visual Resource Management (VRM) Area (see GIS Map 6, Appendix B).

The air quality in the area is good, but it can be dusty during periods of high winds.

The nearest town is Emery, Utah, with a population of 300, which is about 15 miles to the west. Lanny Jensen has his headquarters in Richfield, which has a population of approximately 5,500 people and is located 60 miles west of the subject land.

The following mandatory items have been considered for this environmental assessment and will not be impacted: threatened or endangered plants, threatened or endangered animals, cultural or historical resources, floodplains and wetlands, wilderness values, paleontological resources, prime or unique farmlands, wild and scenic rivers, native American religious concerns, and hazardous/solid wastes (see checklist for environmental assessment, Appendix D).

The proposed operation occurs within the Sids Mountain/I-70 areas of critical environmental concern (ACEC). Both ACECs were established for scenic values. Interstate 70 runs through the I-70 ACEC. The I-70 ACEC is a scenic corridor.

The Sids Mountain Wilderness Study Area, UT-060-23, is located one-half mile east of the easternmost part of the operation.

Environmental Impacts

Impacts of the Proposed Action

Vegetation on approximately 63 acres would be destroyed by the operation over a 12-year period at a rate of 5 acres per year, with about 5 acres currently disturbed by the existing operation. There would be a loss of 6 to 10 AUMs over the 20-year life of the mine. No more than 6 acres would be disturbed at one time. Productivity of the area would be restored upon completion of reclamation. Production of 600,000 tons of gypsum would be an irretrievable commitment of resources.

Animals would be displaced into surrounding areas by the operation, but they would be expected to return once reclamation is complete.

Disturbance of 63 acres would increase soil erosion rates between 10 and 15 tons per acre per year or 30 to 45 tons per year over a 12-year period. Salinity loss rates would also increase by an undetermined amount. Increased salinity could degrade water quality downstream. The conditions of the plan of operations, such as construction of sediment basins and water retention barriers, would mitigate most of the impacts to soils and salinity content by containing the soil and salt within the project area.

The trucks and equipment would emit fumes, but are not expected to exceed air quality standards. Blasting could cause high particulate levels locally, but only for short periods of time. Particulate levels are not expected to be high enough to require monitoring equipment or mitigation.

The surface elevation of the land would be reduced by approximately 15 feet on the 60 acres mined.

The operation would be a visual intrusion, especially in the short term and Class I VRM standards would not be met during the life of the operation, but it would meet the long-term VRM Class I Standards, especially after reclamation is completed. (See Visual Contrast Rating Worksheet, Appendix E.)

Only mine Area A can be seen from I-70 and then only for short periods of time (less than 8 seconds), in a few scattered areas (see GIS Map 2, Appendix B). Viewing time is calculated to be less than 30 seconds in a 2.5-mile section of I-70 for a person traveling eastbound at 60 miles per hour. The operation will be less visible to westbound travelers. Analysis shows that Areas B through D are not visible from I-70 (see GIS Maps 3-5). Due to the limited amount of view time for a traveling vehicle, there should be little impact on the travelers viewing experience.

Since the ACEC's values are related to visual resource, see the visual resource management section for impacts to the visual ACEC.

The operation would provide full-time employment for two truckers.

Off-road vehicle (ORV) traffic could disrupt reclamation. Livestock grazing could also be detrimental to revegetation of reclaimed areas.

The operation would not be expected to impact the Sids Mountain WSA.

Impacts of No Action Alternative

There would be no more than 5 acres of vegetation lost under this alternative. The impacts would be similar to those of the proposed action, but proportionately less due to the 5-acre limitation. There would be an irretrievable commitment of about 100,000 tons of gypsum resource. Approximately 500,000 tons of gypsum would not be mined. Two truckers would be unemployed after the mine is shut down.

Mitigation Measures

Furrowing the ground surface with the contour prior to seeding would increase the success of reclamation. Grading to an undulating surface would make the area look more natural. Fencing reclaimed areas would keep out livestock and ORVs. Otherwise, standard stipulations should be sufficient (see Exhibit 1).

Residual Impacts

There would be no residual impacts once reclamation is completed.

Consultation and Coordination

Holland Shepherd, Utah Division of Oil, Gas and Mining, was consulted regarding the plan of operation.

This EA has been listed on the Utah State Office electronic bulletin board for more than six months.

A public comment period 15 days in length was held. No comments were received.

Appendixes

A. Plan of Operations - Lanny Jensen
B. GIS Maps
C. Photographs
D. Checklist for Environmental Assessment
E. Visual Contrast Rating Worksheet
F. Environmental Assessment Worksheet

Wang 2214D

Price, Utah 84501
Appendix A

NOTICE OF PLAN OF OPERATIONS
SEC 29, T. 22 S., R. 9 E.
SAN RAFAEL SWELL RESOURCE AREA
EMERY COUNTY, UTAH

(Operation Proposed Under the 43 CFR 3809 Regulations)

Previous Correspondence: 25 August 1990, 24 October 1990 and November 26, 1990 to BLM San Rafael Resource Area Management Price, Utah 84501.

Disturbance: The proposed mining activity within the project area will disturb a total of five (5) acres or less during the calender year.

Operator: Lanny L. Jensen P. O. Bx 416 Richfield, Utah 84701
801-896-8822

Claim Owner: John E. Welsh 4780 Bonair Street Holladay, Utah 84117
801-278-6657

Placer Claim Designations:

BJ-2	BLM UMC # 212727	NE/4, SW/4 sec. 29
BJ-5	BLM UNC # 212729	NW/4, SW/4 sec. 29

Location of Activities:

Quarrying of Gypsum Rock in BJ-2 claim in NE/4, SW/4 sec. 29, T. 22S., R. 9 E. Storage of explosives on BJ-5 claim in NW/4, SW/4 sec 29.

Existing Disturbances: Unimproved Roads existed prior to the project, leaving the Moore Road in the SW/4 of sec. 29, crossing the South Salt Wash Drainage into sections 30 and 31. These roads are to abandoned wildcat oil drill hole sites. In this Notice, these earlier roads cross claim BJ-5, and are designated as prior roads on the index map scale 1 : 4.200.

Areas disturbed on claims BJ - 9 & 14 in the SE/4, SE/4 and SW/4, SE/4 sec. 30, T. 22 S., R. 9 E. have been reclaimed and regraded by placing topsoil over the distrubed areas. Reseeding has successfully caused new vegetation to grow. These areas were reseeded at least twice, the latest in 1990. BLM personnel observed the reclamation activities.

Proposed Operation: Equipment consists of a HD 16 B Dozer, a Hydraulic LeRoy Drill, a 966 Cat Loader, a Reed Screen All Model RD-90A.

Equipment will be serviced within a compact area adjacent to the gypsum-rock stockpile. All waste oils and lubricants will be remove from the site.

Explosives used in blast holes for rubbilizing the gypsum rock are stored in a secured building and vault on claim BJ-5, in the NW/4 SW/4 sec. 29, at least 1/4 mile from the quarrying operation. The building and vault are grounded. **No Tresspassing** and **Explosives** signs are erected on a metal sign post at the entrance to the storage area.

Quarry Site on claim BJ-2 in the NE?4, SW/4 sec. 29:

Stop, No Tresspassing, and **Blasting** signs are posted at the entrance to the Quarry.

Quarrying will disturb two (2) to three (3) acres per year.

Access to the quarry is from the Emery County Moore Road. This road has been permited by Emery County officials for access and haulage from the Quarry. At least 50 feet adjacent to the Moore road will not be quarried.

Mining Method is long wall cut and fill. The active quarry bench will be less than fifteen (15) feet high. The two to three feet of "topsoil" will be dozed away to the north and south and stockpiled. The upper one foot of lichen rich topsoil will be segregated so that this will be replaced last over the reclaimed surface. Back filling of the quarried out area will progress concurrently with the retreat of the mining bench.

Drilling and blasting retreats the quarry bench across the slightly dipping gypsum-rock stratigraphic layer.

Rubblized gypsum-rock is moved by a Cat Loader onto a Reed Screen All, which size grades the rock into shipable fractions. Oversized blocks are drilled and blasted in a seperate activity.

Sized gypsum-rock is temporarily stock piled before being trucked Southeast on the Moore Road to Interstate I-70. Usage of the Moore Road has been permitted by Emery County.

Production will be a minimum of 20,000 tons per year with an estimated maximum production of 100,000 tons per year. Haulage truck trips per day will vary from one to seven loads. Employees present at the site of the quarry will vary from one to three.

Proposed Reclamation: The mined out surface at the base of the quarry will be backfilled by overburden "topsoil" from the initial stripping at least within a year of vacating the mined out area of the gypsum-rock bed. Sufficient open space on the quarry floor will be maintained by the Operator to allow for efficient mining at the quarry bench and for activities related to the handling of the gypsum-rock.

The quarry site has a latrine and waste disposal barrels. The site will be kept orderly by periodic cleanup.

There are two small dentritic drainages that disect and drain the gypsum outcrops is claim BJ-2. Both of these drainages head near the Moore Road and drain westerly into the South Salt Wash trunk drainage. These two drainages will be blocked by straw bales at the point just up stream from their entrance into the South Salt Wash truck drainage.

It is noted herein for the record that the South Salt Wash Drainage has been completely degraded by Federal and State activities upstream at the I-70 materials quarry. This quarry operated well into 1990. Sediment foreign to the South Salt Wash Drainage was allowed to flash flood for a distance of miles down stream through the gypsum rock terrane. This foreign sediment has completely changed the chemistry and particle size of sediment in the channel and on the flood terraces.

Any gypsum-rock fines that escape and/or bypass the drainage barriers on claim BJ-2 will be restoring the Salt Wash Drainage to its original balance.

Reclaimed slopes will be leveled to surfaces comparable with or of less slope that the original surface. This activity will replace and harrow the "topsoil" in gentle contours which are receptive to reseeding.

Reseeding will be done at an appropriate time of the year to enhance germination, just before the Winter moisture or on the snowpack in early Spring. Test areas were reseeded in December 1990. Reseeding in previous years in claim BJ-9, NE/4 NE/4 sec. 30, has produced a reasonable new cover on reclaimed areas.

Environmental Effect: Gypum-rock is a non toxic material which is compatible with the surface terrane from which it is being extracted. Soluble gypsum, sediment gypsum, and air borne gypsum are natural constituents of the existing environment on the West Fank of the San Rafael Swell. Quarrying gypsum-rock will have no harmful effect on the existing environment. The reclaimed surface after quarrying will be more productive for grazing than the original lichen covered surface. Marginal grazing is the only present land use of the West Flank of the San Rafael Swell. .

Gypsum-rock products are increasingly replacing wood products. There is probably no more useful and environmentally compatible naturally occurring material than gypsum.

Period of Operation: From 1990 to 2000 and beyond.

Statement of Complaince: All Federal, State, and County Transportation, Water Quality, Air Quality, Solid Waste Disposal laws and regulations shall be complied with. I will complete all necessary reclamation of areas disturbed during the course of my operations to the standard described in 43 CFR 3809.1-3 (d) and that reasonable measures will be taken to prevent unnecessary or undue degradation of the federal lands during operations.

Signature of Operator _____ **Date:** 12/27/90

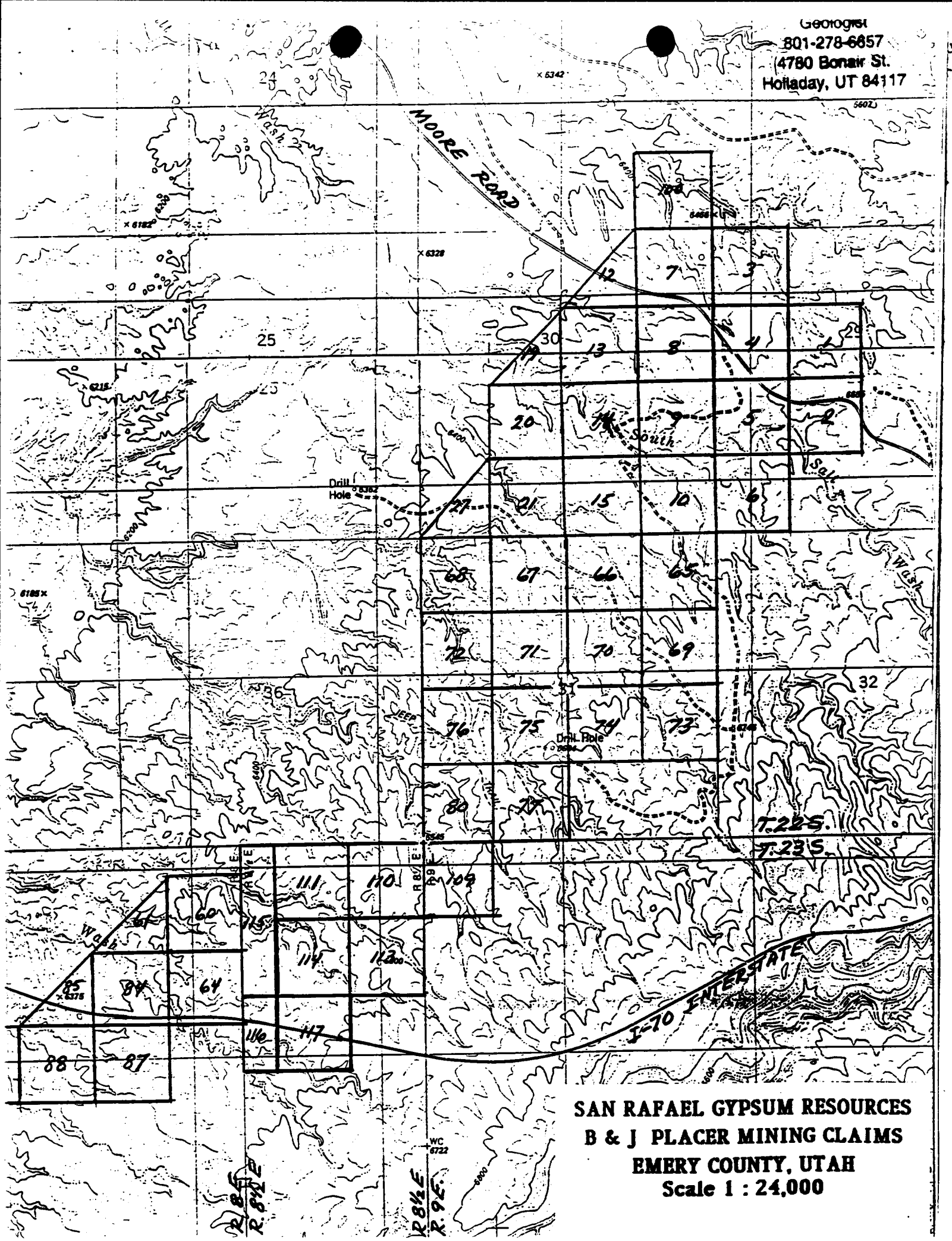
Enclosures: 1 : 4,200 Scale Map and 1 : 24,000 Scale Map.

Photographs of Equipment Used in Operations.

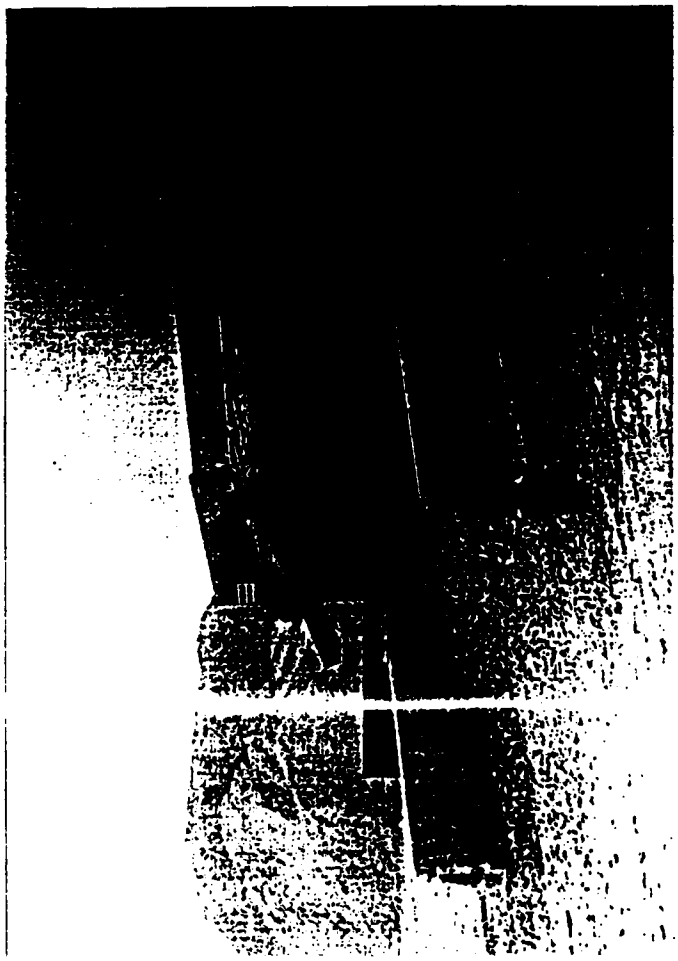
Original Copy to : San Rafael Resource Area Management
900 North 700 East
Price, Utah 84501

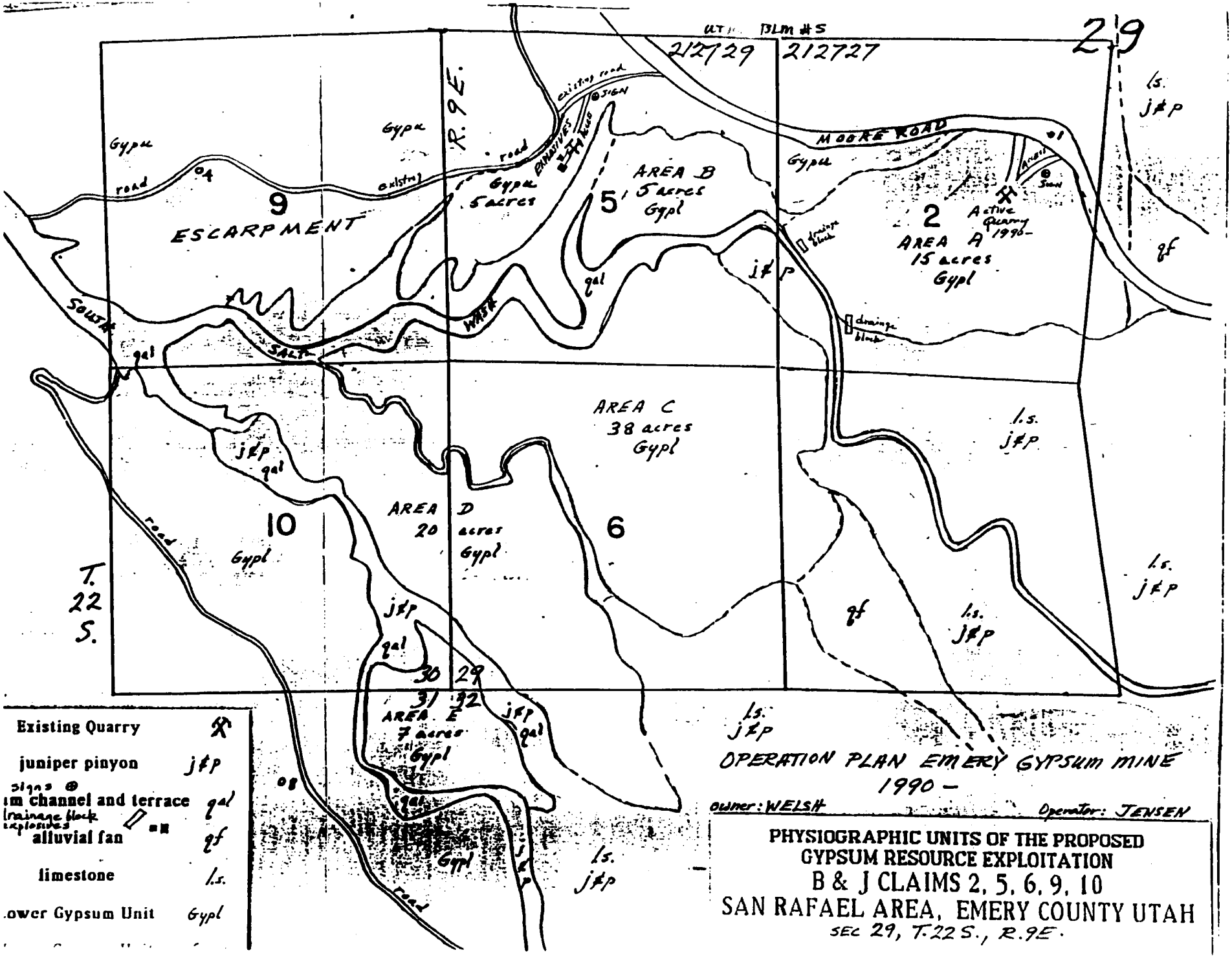
Copy to : Holland Shepherd, Utah Oil, Gas, and Mining Division
Salt Lake City, Utah

Geologist
801-278-6857
4780 Bonair St.
Holladay, UT 84117



SAN RAFAEL GYPSUM RESOURCES
B & J PLACER MINING CLAIMS
EMERY COUNTY, UTAH
Scale 1 : 24,000





OPERATION PLAN EMERY GYPSUM MINE
1990 –

owner: WELSH Operator: JENSEN

PHYSIOGRAPHIC UNITS OF THE PROPOSED GYPSUM RESOURCE EXPLOITATION

B & J CLAIMS 2, 5, 6, 9, 10

SAN RAFAEL AREA, EMERY COUNTY UTAH

SEC 29, T.22 S., R.9E.

Lanny Jensen
P.O. Box 416
Richfield, Ut. 84701

SR/PR Rec'd MAY 24 1991

Moab District
San Rafael Resource Area
900 North 700 East
Price, Utah 84501

Dear Sirs; Supplement to plan of operations for BJ-2 and BJ-5 mining claims in Emery County, Utah.

Have enclosed a map with three (3) area's locating designated A,B, and C. Area A, will be mined durning calendar years 1991 and 1992. Area B, will be mined late in 1992 and should last thru 1994. For the remainder of the ten (10) year period Area C will be adequate.

Area A does contain 15 acres, but only 6 to 7 acres will be disturbed. Dust control measures that has been and will be used on the road,Cloride has been sprayed to compact and minimize dust. In the mine all milling has ceased and is being done at a another established area in Sevier County. A 30 foot barrier wall will be left against the banks of South Salt wash as requested by the B.L.M.

Blasting will be approximately 120 holes at single intervals approximately once every 6 weeks.

The quarry hole will be kept to a minimum of 100 feet from county road. Before the time of a sediment problem could begin, sedimentation basins will be constructed around the quarries.

The high walls in the quarries will be reduced to at least a 3 to 1 slope and shaped as close as possible to the exsisting area. All drainage patterns will be restored along with reclaimation as mining is completed.

The upper 1 or 2 inches of topsoil containing the cryptograms has been and will be stripped and stockpiled separately and replaced back on surface after all reclaimation such as shaping and topsoil is finished.

The stockpiling of white gypsum will be kept out of sight as much as possible from being seen from I-70.

Thank You,

Lanny L. Jensen

copy 7 BLM

June 5, 1991

San Rafael Resource Area
Moab District of the U. S. Bureau of Land Management
900 North 700 East
Price, Utah 84501

SR/PR Rec'd JUN 13 1991

Subject: Supplement to the Plan of Operations for the Gypsum Rock Quarrying Operations on Unpatented Placer Mining Claims BJ # 2, #5, #6 and #10;
UTMC # 212727 ; 212729 ; 226190 ; 226191
Emery County, Utah
SW sec. 29 and SE sec. 30, T. 22 S., R. 9 E.

Enclosed is a description of the activites for quarrying gypsum rock on the San Rafael Resource Area for the next ten years at an estimated rate of 50,000 tons per year. Quarrying is now being done in Area A adjacent to the Moore Road. An outline of the presently disturbed area is indicated on the enclosed copy of an aerial photographic enlargement.

Development is described in four areas adjacent to the Salt Wash Drainage and notations are made on the overlay of the photograph.

Emery County now has a bond covering activities on the Moore Road. This bond may be expanded to include the reclamation and quarrying activities on the placer mining claims in October when it is renewed. Mr. Holland Shepherd of the Utah Oil, Gas, and Mining Division stated that he will accept the bonding arrangements agreed upon by the BLM and Emery County.

If you need any further data before a public hearing on this Plan of Operations please so inform us.

W/ Enclosures

Sincerely,

Lanny L. Jensen

P. O. Box 416
Richfield, Utah 84701

QUARRYING ACTIVITIES:

AREA **A** (approximately 15 acres) SR/PR Rec'd JUN 13 1991

Production The area disturbed by the quarrying operation as of June 1, 1991 is approximately 5 acres. An estimated 25,000 tons of gypsum rock will have been removed from Area A by June 1, 1991. At least an additional 25,000 tons still remains to quarried within the presently disturbed area, which will allow quarrying into late 1991 or early 1992.

After the above 5 acres is depleted of gypsum rock the activity will move westward with a tributary drainage being the limit of the quarry. It may or may not be practical to cross this tributary and quarry the narrow strip of the lower gypsum bed north of the drainage but still south of the Moore Road.

Quarrying will next proceed south and southeast of the presently disturbed area as long as the non eroded thickness of the gypsum rock can be quarried and produce a high quality product.

It is estimated that Area A will have at least a 2 year resource based upon the current 50,000 tons/year rate of production. This resource estimate may vary upon quality control and economic factors. Area A should provide gypsum rock through 1992.

Drainage There are two tributaries of the South Salt Wash drainage in Area A. The catchment basin for both tributaries is small and entirely within the gypsum outcrop of Area A. The present disturbed area has no effect on these tributaries. When the quarrying activities approach these tributaries then "check dams" will be placed at points above the intersections with South Salt Wash. Since these tributaries carry a mimimal load of only gypsum clasts and begin south of and below the Moore Road, quarrying activities may cross the tributaries with no effect on South Salt Wash. It is restated herein from earlier correspondence with the BLM San Rafael Resource Area Management, that the sediment load in the South Salt Wash Drainage has been modified by the influx of fine clastics from the I-70 Materials Site Quarry upstream 2 miles to the East.

When the gypsum rock quarrying activity approaches the South Salt Wash drainage a berm will be left as a barrier.

Reclamation Backfilling of the depleted quarry pits has already been started in the 5 acres presently disturbed. The artifical mound of fines produced by trial screening and crushing activities is being reduced by shipments and backfilling. Complete removal of this one pile will reduce the visual impact and keep the entire operation at or below the original contour. As soon as the quarrying depletes a reasonably sized area (3 acres) backfilling, replacing "top soil", recontouring and reseeding will follow.

Road Acess The present access off of the Moore Road will be sufficient for all proposed activites in Area A.

AREA **B** (approximately 5 acres)

Production There are approximately 40,000 tons of gypsum rock resource in Area B. An existing access road to the present explosives cache will be suitable for operations in Area B. Area B may be quarried in late 1992 and 1993.

Drainage There is one small tributary in Area B which may be easily blocked with a check dam. The south margin along South Salt Wash may be stabilized by leaving a berm. Neither Area A or B have a significant catchment area to cause any concern even during severe thunderstorms accompanied with sheetflooding. Area B has a slight inclination toward South Salt Wash. Only the large drainage of South Salt Wash periodically has flash flooding.

Reclamation Top soil will be removed and stockpiled. After the completion of the quarrying of gypsum rock, Area B will be backfilled, recontoured and reseeded.

An area in the NW/4 of Claim BJ #5 previously disturbed in the exploration assessment will now be recontoured and reseeded in the Fall of 1991. Only the area of the access road to Area B will utilized in the future as the main road to Areas C and D.

AREA **C** (approximately 38 acres)

Access The road into Area B will have to be extended across the South Salt Wash Drainage into Area C. This road will cross in the S/2 of claim BJ #5. Because the alluvium in the South Salt Wash Drainage is now covered by a clayey silt from the recent upstream contamination it is planned to trench down to the limestone bedrock and construct a concrete apron across the drainage. An apron across the drainage will solve the problem of truck haulage and periodic flash flooding. Operations will be suspended during a flash flood episode.

Production Area C is underlain by outcrops of the lower gypsum bed which is the same bed quarried in Area A. There is in excess of 250,000 tons of gypsum rock resource in Area C, which will have to be drilled to confirm the reserves before selective quarrying.

Drainage There is one large tributary in the SE coner of Area C, and other short steep gullies around the periphery on the North and South. The large tributary may be blocked by a check dam, the gullies bermed.

Reclamation Top soil will be stripped and stockpiled. After several acres are quarried then backfilling, recontouring and reseeding will progressively follow the quarrying activities.

Timing Area C will probably be opened in 1993, and last at a 50,000 ton/year rate of production for 5 years into 1998.

AREA **D** (Approximatley 20 acres)

Access A quarry road into Area D will cross from Area C a tributary of the South Wash Drainage. This tribuatry has a limestone bedrock which can have a concrete apron constructed if necessary.

Production A 150,000 ton resource is estimated in Area D.

Drainage The flash flood potential in this tributary is minimal because the flow volume is never high. During high water flow in the tributary operations will be suspended.

Reclamation Reclamation will be similar to the pervious areas quarried.

Economic Prediction: At the present 50,000 tons/year production of gypsum rock the resource in Areas A, B, C, and D, will last either a minimum of 10 years or a maximum of 15 years. Because 1990-91 is in a depressed construction business cycle, it is not possible to predict the future demand for gypsum rock from the San Rafael Resource Area.

Processed gypsum rock materials may increasingly compete with wood in construction. Gypsum rock is non toxic and may be quarried with a minimum of environmental impact.

Haulage of the Moore Road: The Emery County Moore Road is used for approximately 2 miles to the I-70 interchange. This road is built for the entire distance on structurally competent limestone bedrock.
The road material is from the same limestone. Approximately 2,000 trips per year are necessary to move 50,000 tons of gypsum rock. This averages 10 trips per day for 200 days. Haulage cannot damage the underlying road base because it is bedrock.

The Moore Road now has regulatory signs warning the local traffic of trucks. Barriers have been constructed at appropriate places parallel with the road. The road has been graded periodicaly and any deterioration will be corrected as needed.

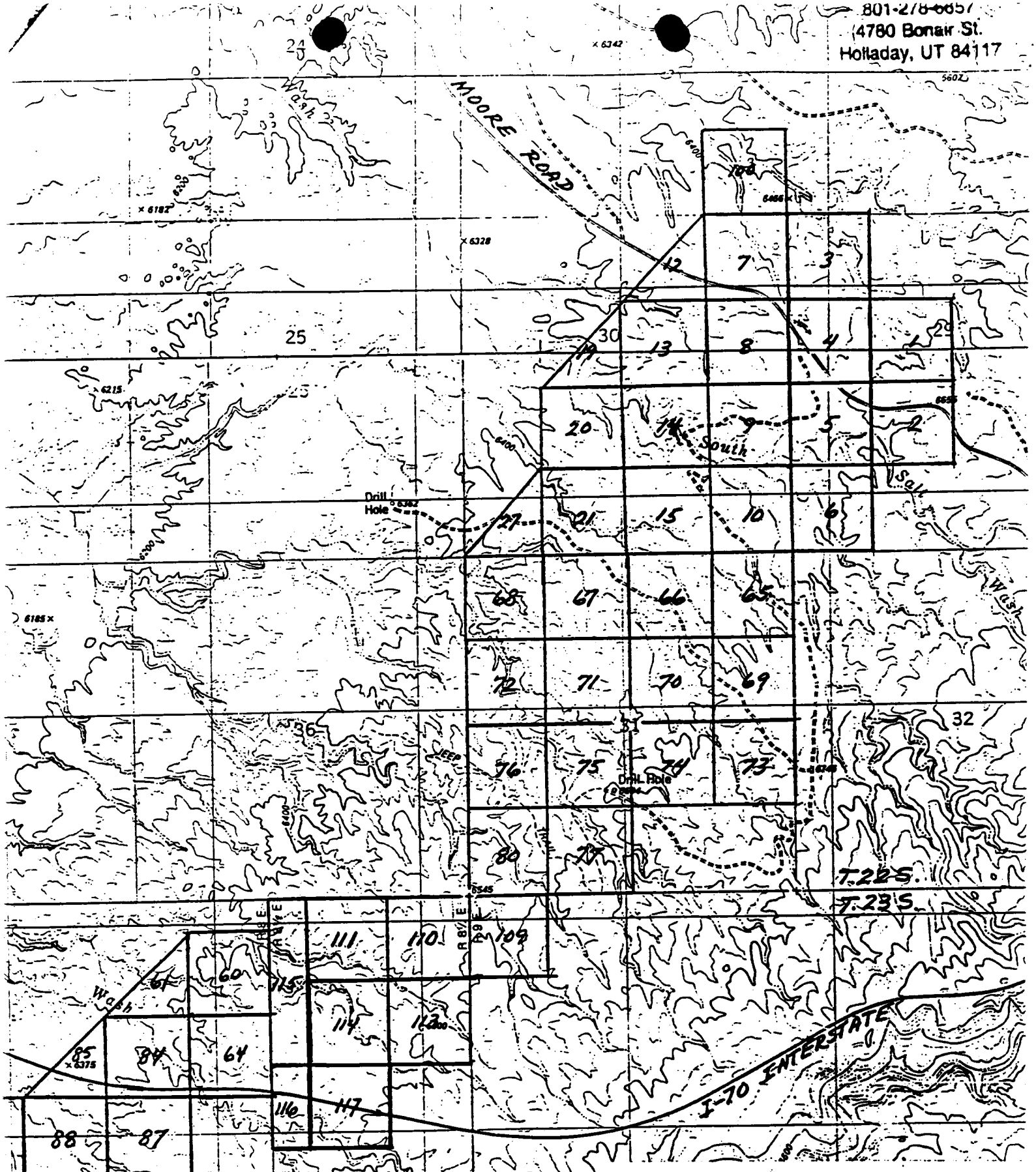
Air Polution: There is presently no crushing or screening at the quarry site. The juniper and pinyon adjacent to the Moore road and

East of the quarry receive dust from the local traffic as well as the truck traffic. The road dust is not a problem at this time. The road has been treated with a magnesium chloride solution once since quarrying began. Reapplications of this solution will be applied as necessary. If in the future crushing and screening activities are added at the quarry site, then permitting and dust control will be addressed.

Blasting: Approximately 120 holes are drilled at single intervals once every six week to pulverize a block of gypsum rock. The blast ejects some stone and dust into the air which settled back upon the quarry site. At the time of blasting, the local traffic on the Moore Road is stopped. The explosives are stored in secure vaults West of Area B. Regulatory signs of blasting and explosive storage are posted just off of the Moore Road.

Reseeding: Reseeding which was done 5 years ago in disturbed areas has been very sucessful with forage cover greater than 1 plant per square foot. Reseeding took place 3 years ago in the N/2 of claim BJ #9, with two more recent applications over the same area. This area has new plants approaching the success of the 5 year area. Several small areas have been reseeded as recently as the Winter of 1990-91, these areas show little recovery as yet.

801-278-6657
4780 Bonair St.
Holladay, UT 84117



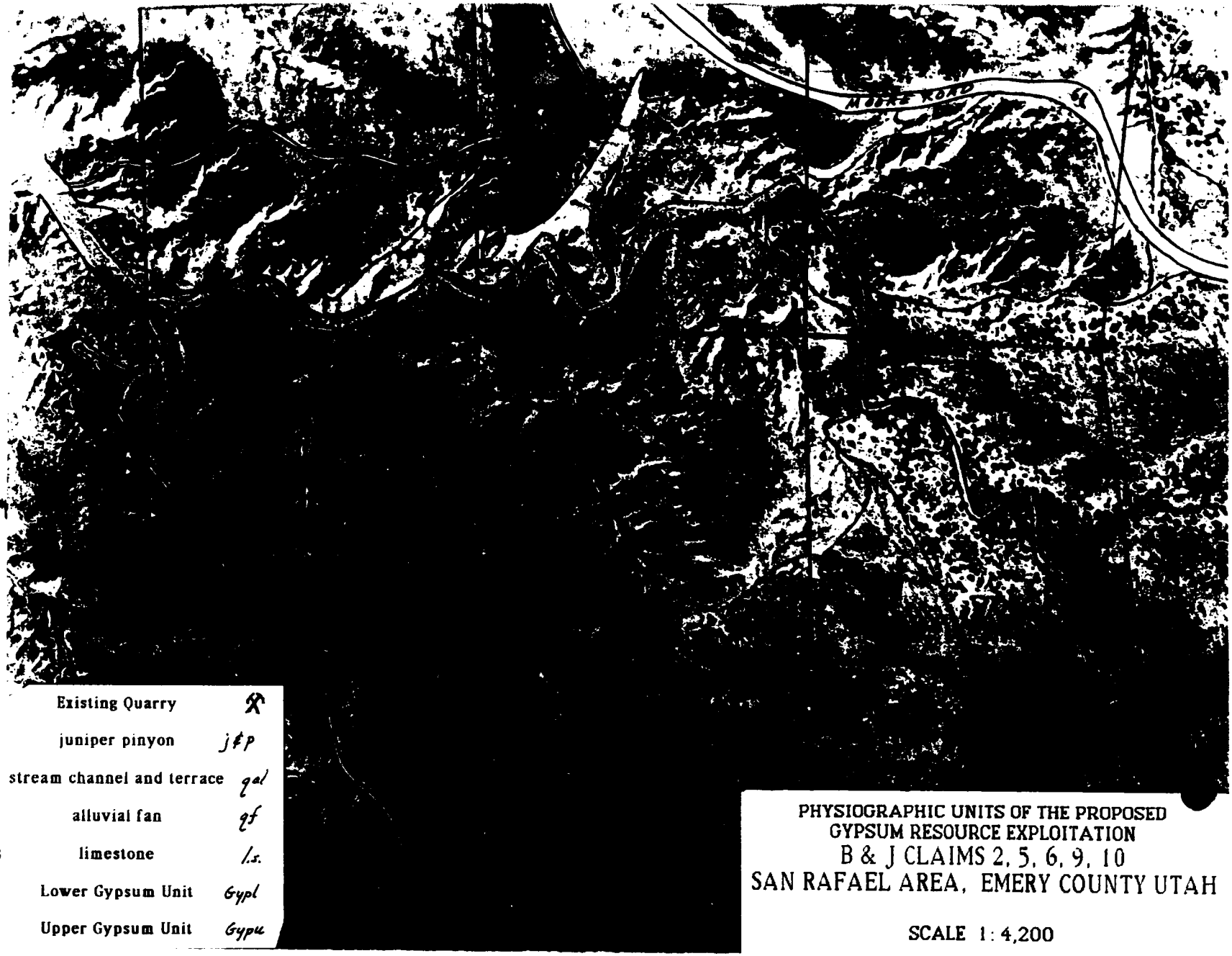
SAN RAFAEL GYPSUM RESOURCES

B & J PLACER MINING CLAIMS

EMERY COUNTY, UTAH

Scale 1 : 24,000

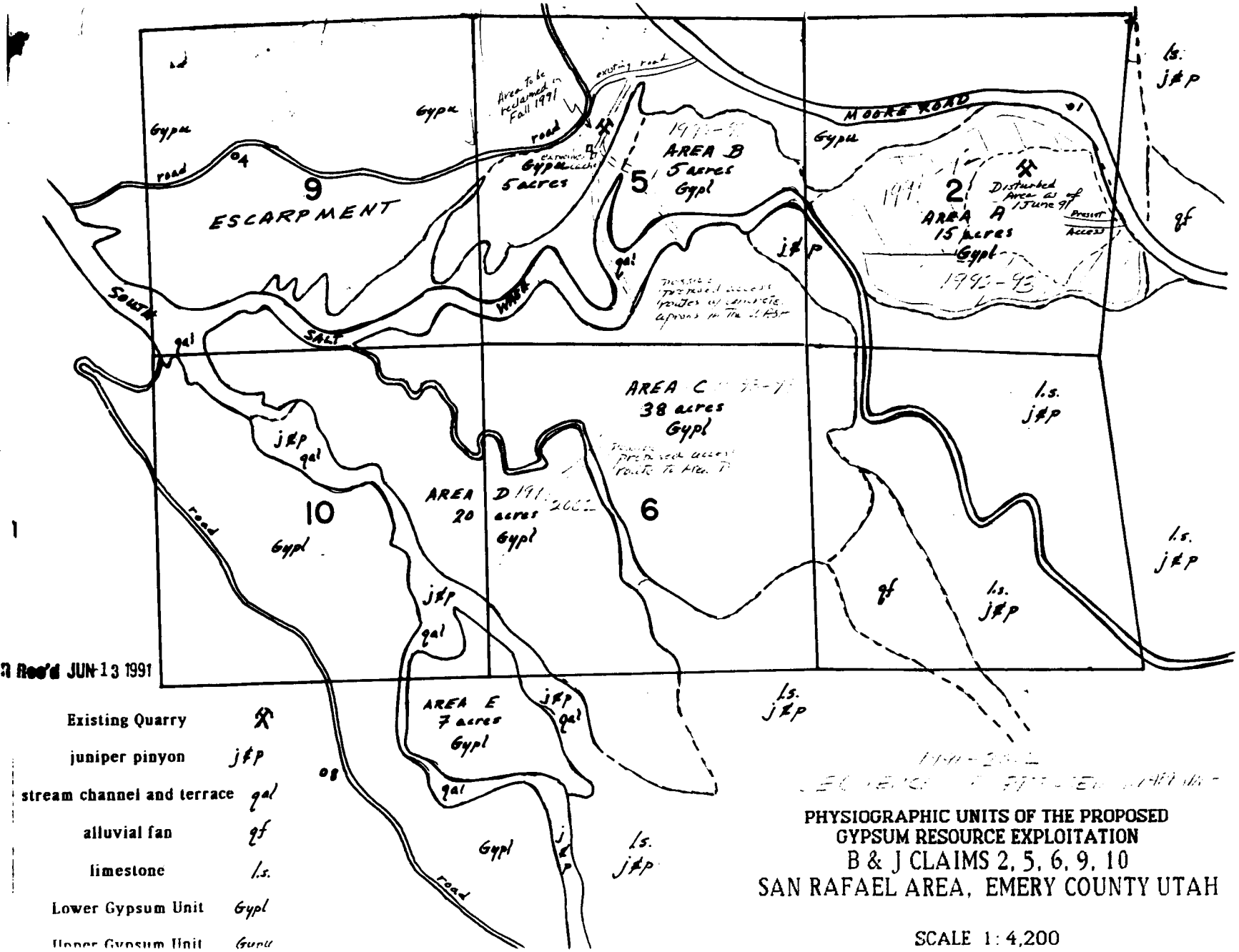
SR/PR Rec'd JUN 13 1991



Existing Quarry	⚒
juniper pinyon	j&p
stream channel and terrace	qal
alluvial fan	qf
limestone	ls.
Lower Gypsum Unit	Gypl
Upper Gypsum Unit	Gypu

PHYSIOGRAPHIC UNITS OF THE PROPOSED
GYPSUM RESOURCE EXPLOITATION
B & J CLAIMS 2, 5, 6, 9, 10
SAN RAFAEL AREA, EMERY COUNTY UTAH

SCALE 1: 4,200



SR/ST Rec'd JUN 13 1991

PHYSIOGRAPHIC UNITS OF THE PROPOSED GYPSUM RESOURCE EXPLOITATION

B & J CLAIMS 2, 5, 6, 9, 10

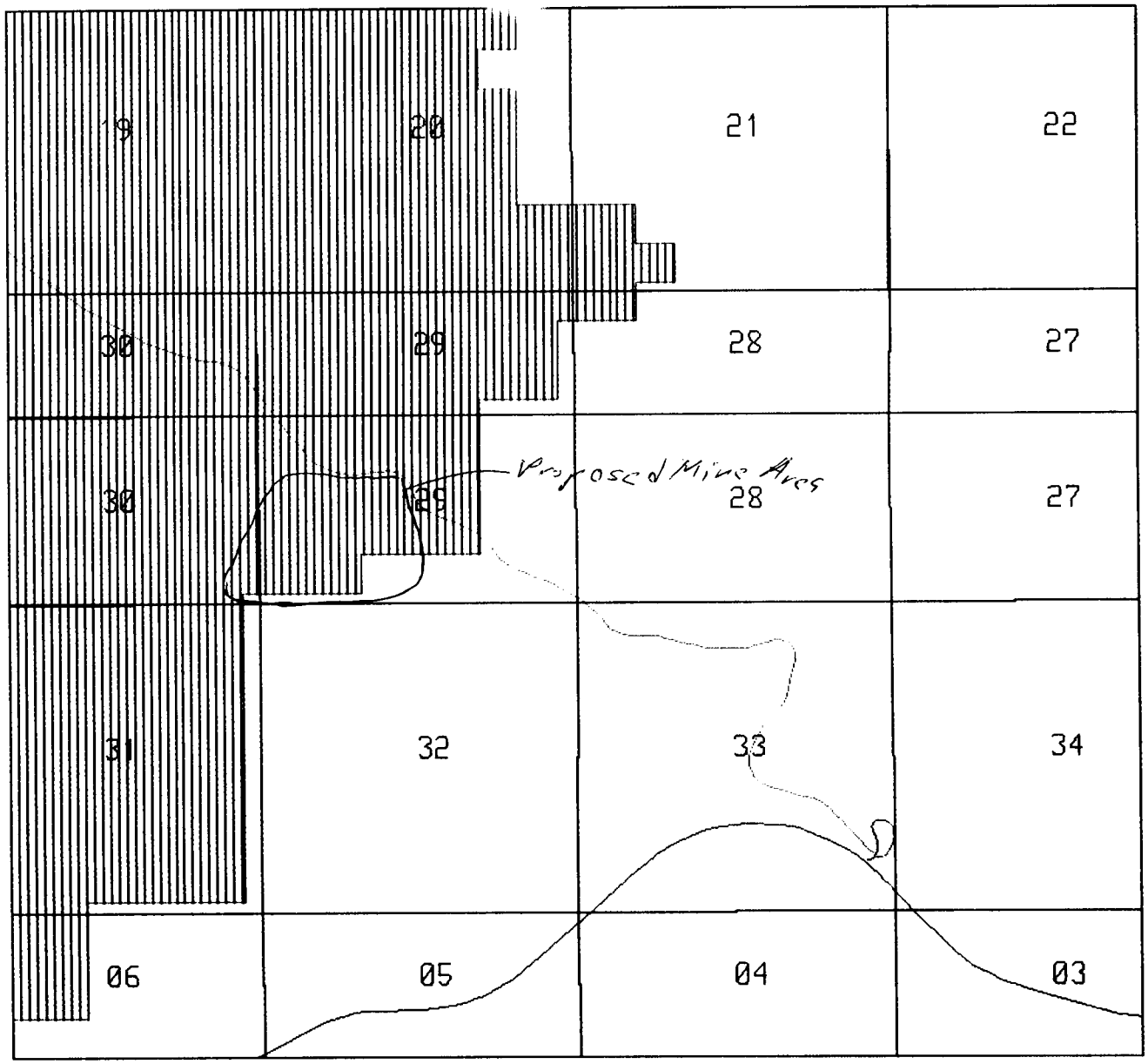
SAN RAFAEL AREA, EMERY COUNTY UTAH

SCALE 1:4,200

Appendix B

GIS MAP 1

Critical Soils

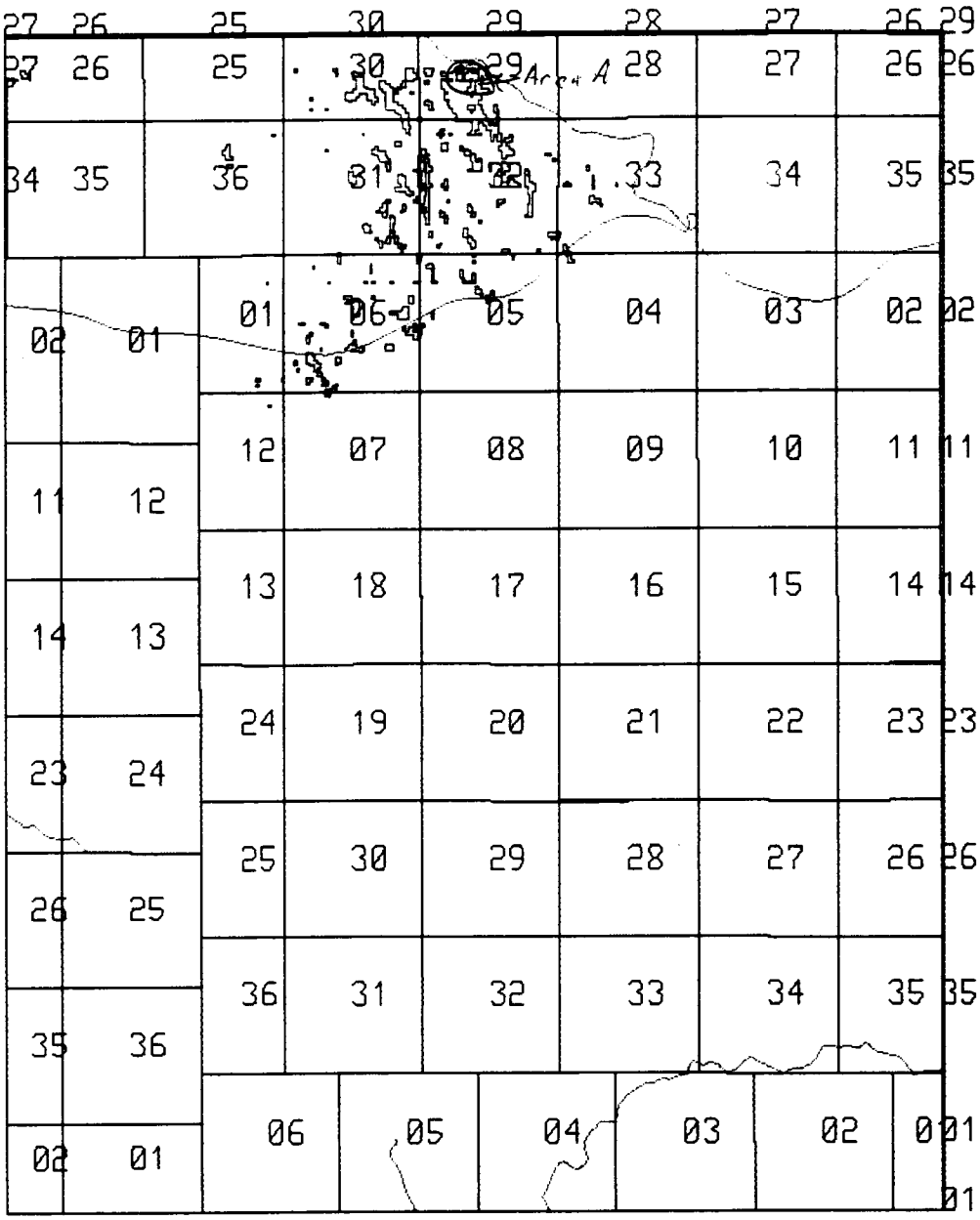


Critical Soils

County Roads

I-70

GIS MAP 2

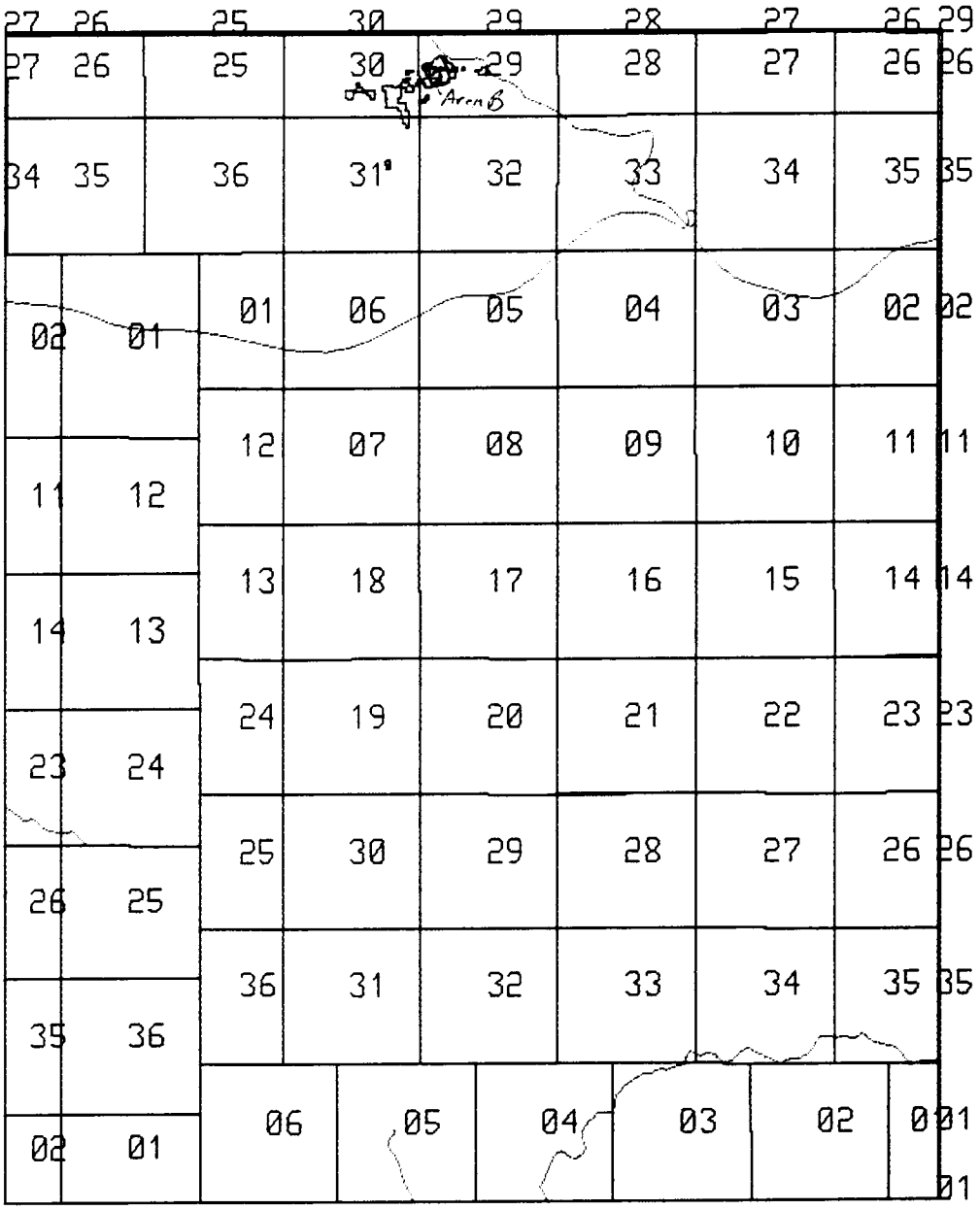


Areas which can see Mine Area A

I-70

County Roads

GIS MAP 3

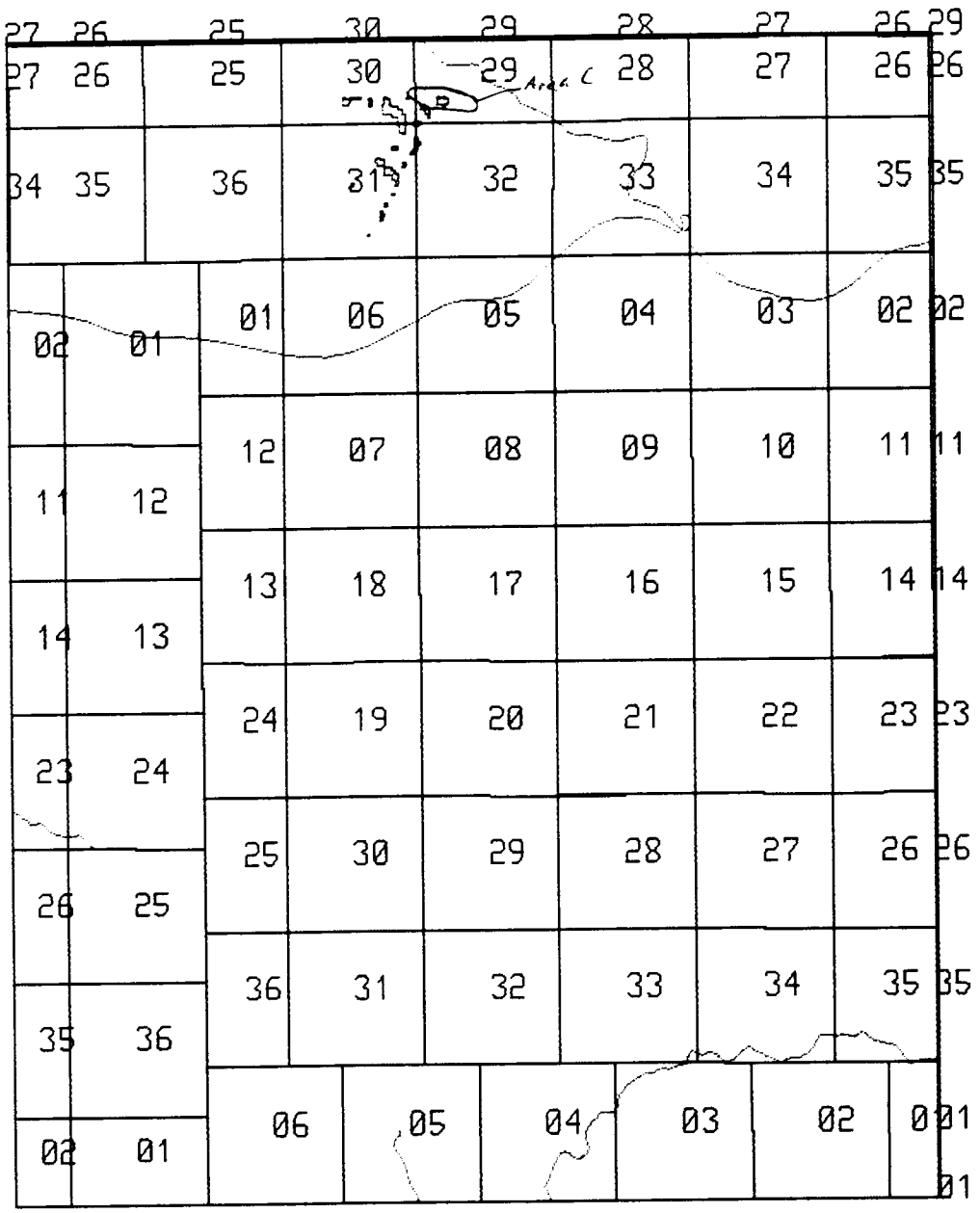


Areas which can see Mine Area B

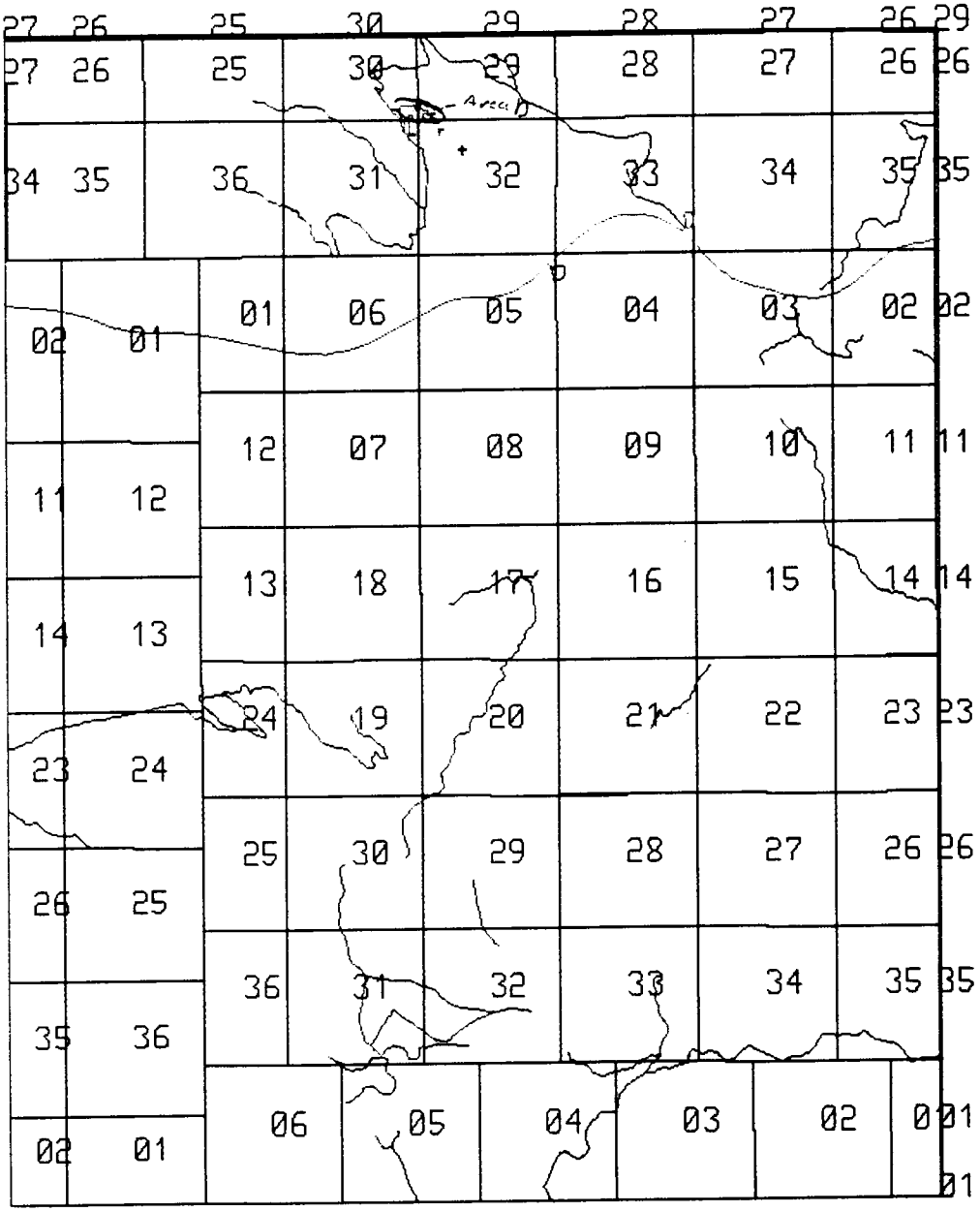
I-70

County Roads

GIS MAP



GIS Map 5



Areas which can see Mine Area D

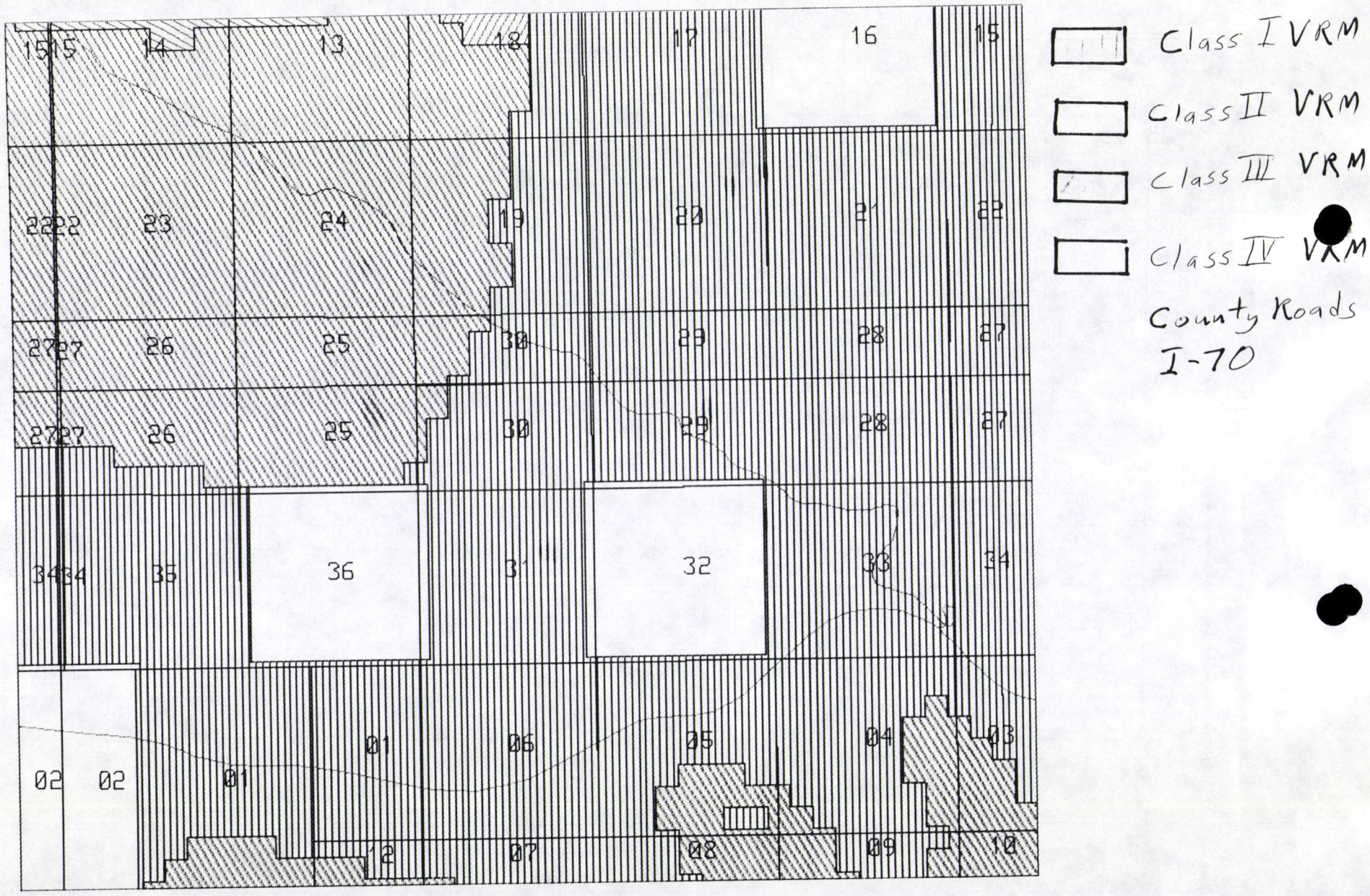
I-70

County Roads

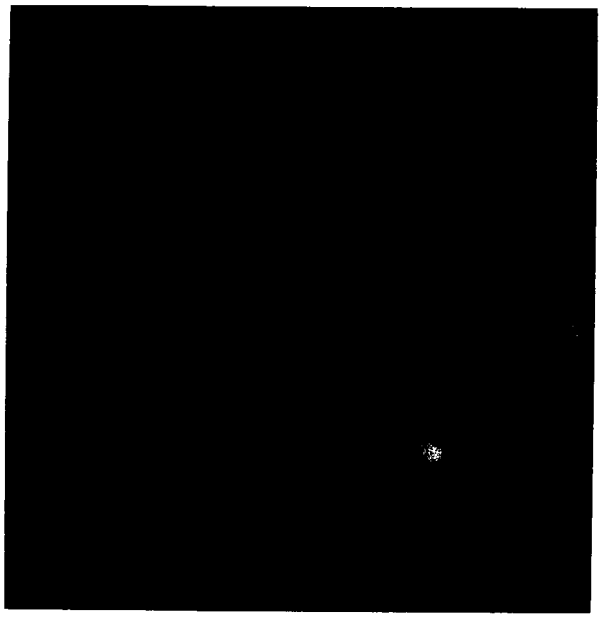
Trails

GIS MAP 5

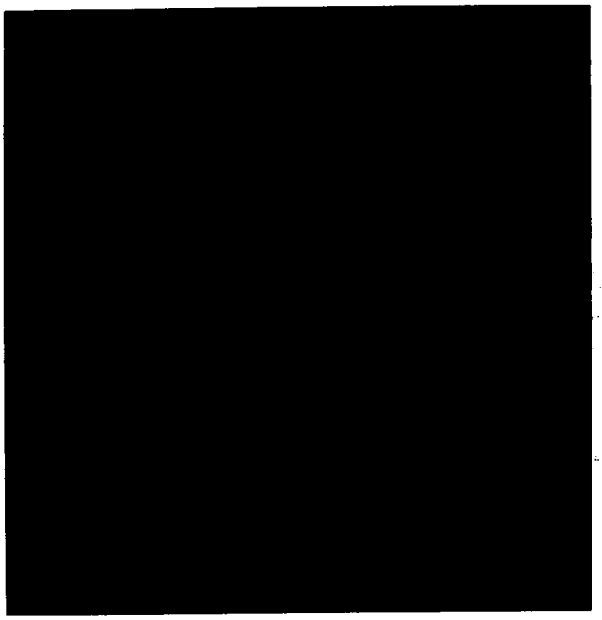
Visual Resource Management



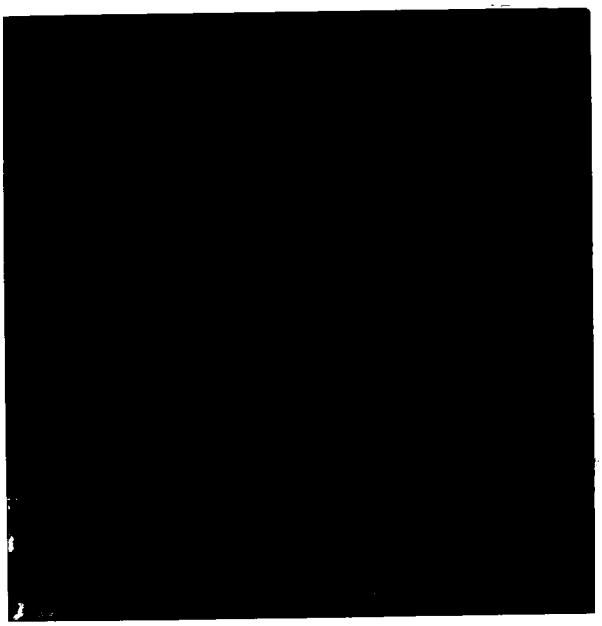
Appendix C



WELSH'S GYPSUM MINE
5-23-91



PROPOSED EXPANSION OF B & J PIT



CRYPTOGAMIC SOILS ON B &J
EXPANSION AREA

Appendix D

File Code 3809

CHECKLIST FOR ENVIRONMENTAL ASSESSMENT

Applicant Lanny Jensen
Address P.O. Box 476
Richfield, UT 84701
EA Preparation Date
Project Title BoJ Plan of Operations/Gypsum Mine
Project Location T. 22S., R.9E., Section 29, SW1/4, Section 30, SE1/4
Proposed Action: Approve a Plan of Operation submitted by Lanny Jensen for a gypsum mine.

Lease/Serial No. U67-891-04
BLM Office San Rafael Resource Area
Location Price, UT 84501
EA No. UT-067-91-004

The following mandatory items have been considered for this environmental assessment. Items that may be impacted have been discussed within the environmental assessment; the remainder will not be affected and are not discussed.

		May Be Impacted	Will Not Be Affected		Specialist Signature/Date
1.	a.	[ ]	[✓]	Threatened or Endangered Plants	W Ludington 6/24/91
	b.	[ ]	[✓]	Threatened or Endangered Animals	W Ludington 6/24/91
2.		[X]	[ ]	Areas of Critical Environmental Concern	T. Linderman 6/24/91
3.		[ ]	[✓]	Cultural or Historic Resources	Blaine A Miller 7/15/91
4.		[ ]	[✓]	Floodplains and Wetlands	Jim Hartz 6/24/91
5.		[ ]	[X]	Wilderness Values	T. Linderman 6/24/91
6.		[X]	[ ]	Visual Resource Management (was I)	T. Linderman 6/24/91
7.		[✓]	[ ]	Water Resources	J. Hartz 6/26/91
8.		[ ]	[✓]	Air Quality	J. Hartz 6/26/91
9.		[ ]	[✓]	Paleontological Resources	Neil A Simmons 6-24-91
10.		[ ]	[X]	Prime or Unique Farmlands	[illegible] 6/24/91
11.		[ ]	[X]	Wild and Scenic Rivers	T. Linderman 6/24/91
12.		[ ]	[✓]	Nat. Amer. Rel. Concerns	Blaine A Miller 6/28/91
13.		[ ]	[X]	Wastes, Hazardous/Solid	Paul W. Kelley 6/24/91

The above project has been analyzed for conformance with BLM plans and consistency with local government plans. Significant discrepancies are discussed in the body of the environmental assessment.

BLM Plan and
Date: San Rafael RMP approved 5-24-91

Local Government Plans and
Dates: Zoning Resolution of Emery County, January 1984

The following items have also been considered in this Environmental Assessment. Items which may be impacted have been discussed within the Environmental Assessment; the remainder will not be affected and are not discussed.

	May Be Impacted	Will Not Be Affected	Resource	Specialist Signature/Date
1.	[ ]	[X]	Grazing	6/24/91
2.	[ ]	[✓]	Wildlife	W Ludington 6/24/91
3.	[ ]	[X]	Recreation	T. Jensen 6/24/91
✓4.	[✓]	[ ]	Soils	J. Hartz 6/24/91
5.	[ ]	[ ]		

Wang 0040L

Form 8400-4
(September 1985)

Appendix E

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

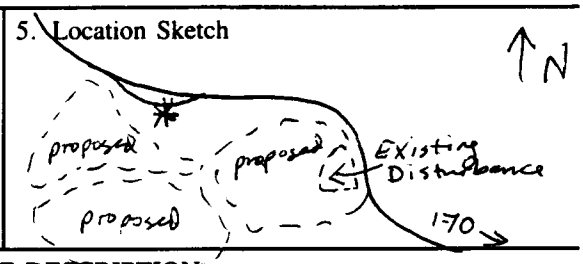
Date 6/27/91
District MOAB
Resource Area SRRA
Activity (program) 4130-15

SECTION A. PROJECT INFORMATION

1. Project Name: B & J Gypsum
2. Key Observation Point *: Approx. 100 yds NW of site at eye level
3. VRM Class: I

4. Location
Township 22 S.
Range 9E
Section 29 & 30

5. Location Sketch



SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Rolling, dissected w/drainages, gentle to steep slopes	Short, low & sparse around site, junipers in background.	Gravel road & fence along N. side of site. Several large pieces of equipment in pit.
LINE	Horizontal	Irregular horizontal line where junipers start	Angular
COLOR	Greyish tan around site, brilliant white gypsum on site.	Greyish green - summer Greyish yellow - fall/winter Grey to dk green - junipers	Yellow & green metal
TEXTURE	Medium around site, coarse in juniper area.	Clumped, uniformly distributed	Smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Areas between drainages flatter.	Same as above, probably more random depending on rehab success.	Same as above
LINE	Horizontal	Same as above.	"
COLOR	Greyish white	Similar to above.	"
TEXTURE	Same as above.	Sparse & scattered, depending on rehab.	"

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST	FEATURES: LAND/WATER BODY (1) Strong	Moderate	Weak	None	VEGETATION (2) Strong	Moderate	Weak	None	STRUCTURES (3) Strong	Moderate	Weak	None
ELEMENTS: Form		X					X					X
Line				X				X				X
Color			X					X				X
Texture				X		X						X

2. Does project design meet visual resource management objectives? ☒ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☒ Yes ☒ No (Explain on reverse side)

Evaluator's Names — Date

Trish Lindaman — 6/27/91

SECTION D. (Continued)

Comments from item 2.

Class I standards will only be met over the long-term. While the mining is in process, VRM standards will not be met, but keeping machinery & stockpiles in the pit will help. 'Moderate' ratings on form & texture are worst-case scenarios.

The success of returning to Class I standards will depend on careful contouring, covering up the whiter subsurface material, & seeding repeatedly until it takes.

Additional Mitigating Measures (See item 3)

To prevent OHV traffic on rehabed areas after mining is complete in each area (ie A, B, C), block access with large rocks & remove any man-made wash crossings.

☆U.S. GOVERNMENT PRINTING OFFICE: 1985—461-988/33094

Appendix F

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL ASSESSMENT WORKSHEET

1. Action Approve a plan of operations for a gypsum mine for Lanny Jensen located in T. 22S, R9E, Section 29, SW1/4 Section 30, SE1/4

2. Stages of implementation

3. DISCRETE OPERATIONS	Overburden Removal	Drilling + Blasting	Excavation	Transportation	4. COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	5. ANTICIPATED IMPACTS	6. REMARKS
I. NONLIVING COMPONENTS					A. AIR		
					Particulates	-L	-M	-L	-L	
					Fumes	-L	-L	-L	-L	
					B. LAND		
					Topography	-L	0	-M	0	
					Soils	-L	-L	-L	-L	
					Paleontology	-X	0	0	0	
					C. WATER		
					Ground	0	0	0	0	
					Surface	-L	-L	-L	-L	
II. LIVING COMPONENTS					A. PLANTS (Aquatic)		
					NA		

(Continued on reverse)

DISCRETE OPE[redacted]NS

COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	Overburden Removal	Drilling & Blasting	Excavation	Transportation		REMARKS
II. LIVING COMPONENTS (Con.)						
B. PLANTS (*Terrestrial*)						
Grasses	-L	0	0	0		
Shrubs	-L	0	0	0		
Forbs	-L	0	0	0		
Cryptogams	-M	0	0	0		
Trees	-L	0	0	0		
C. ANIMALS (*Aquatic*)						
N.A.						
D. ANIMALS (*Terrestrial*)						
Birds	-M	-M	-M	-M		
Mammals	-M	-M	-M	-M		
Reptiles	-M	-M	-M	-M		
III. HUMAN VALUES						
A. LANDSCAPE CHARACTER						
Wilderness	0	0	0	0		
Visual	-M	-M	-M	-M		
B. SOCIOCULTURAL INTERESTS						
Socioeconomic	+L	+L	+L	+L		
Recreation	0	0	0	0		
Cultural	-X	-X	-X	-X		
IV. INTERRELATIONSHIPS						
A. ECOSYSTEM PROCESSES, STRUCTURES AND FUNCTIONS	0	0	0	0		

INSTRUCTIONS

1. *Action* – Enter action being taken, analytic step for which worksheet is being used, environmental viewpoint of impact, and any assumptions relating to impact.
   a. Worksheet is normally used to analyze "*Anticipated Impacts*" of action; *however*, it may be used to analyze "*Residual Impacts.*" Worksheets may also be used to compare impacts before and after mitigating measures are applied.
   b. State viewpoint that best describes environmental impact. For example, a fence viewed down the fence line has greater impact than the same fence viewed over an entire allotment. Generally, narrow viewpoints better illustrate specific impacts than will broad viewpoints.
   c. Assumptions may be made to establish a base for analysis (*e.g. estimated time periods, season of year, etc.*).
2. *Stages of Implementation* – Identify different phases of proposed project (*e.g. a road project consists of survey, construction, use, and maintenance stages*).
3. *Discrete Operations* – Identify separate actions comprising a particular stage of implementation (*e.g. the construction stage of the road project has the discrete operations of clearing, grading, and surfacing*).
4. *Elements Impacted* – Enter under appropriate heading all environmental elements susceptible to impact from action and alternatives. Relevant elements not contained in the digest should also be entered. See BLM Manual 1791, Appendix 2, Environmental Digest.
5. *Anticipated Impact* – Evaluate anticipated impact on each element and place an entry in the appropriate square indicating degree of impact as low (L), medium (M), high (H), no impact (O), or unknown or negligable (X). Preceed each entry by a plus (+) or minus (–) sign indicating a beneficial or adverse type of impact. If type of impact reflects a matter of opinion or is not known, *do not* preceed with a sign. For example, construction of a wind mill on open range has a definite visual impact; *however*, to some people the effect is detrimental while to others it is an improvement. By not entering a plus (+) or minus (–) sign the worksheet is kept factual and unbiased. If both degree and type of impact are unknown, place an (x) in the appropriate square.
   a. The measures of impact (*e.g. low, medium, and high*) are relative and their meaning may vary slightly from action to action. The term "*low*" should not be applied to impacts of a negligible nature. For example, we know that a pickup truck driving down a proposed fence line laying wire has some impact on air quality. However, the significance of this impact is not normally great enough to warrant even a "*low*" rating. In cases like this, the impact will usually be marked "O" or the element left off the worksheet.
   b. It is recognized that some environmental elements may defy accurate measurement or in-depth analysis within current Bureau capabilities or expertise. The nature of the action as well as type and degree of impact should guide in the decision to seek outside expertise or assistance.
6. *Remarks* – Enter clarifying information.

GPO 848 - 276